Responses to Permit-Related Public Comments

Sunshine Gas Producers Renewable Energy Project Proposed Title V Permit

Sunshine Canyon Landfill Proposed Title V Permit Renewal and Revision

April 27, 2012

On April 18, 2012, the South Coast Air Quality Management District (AQMD) held a title V public consultation meeting in response to public interest on the Sunshine Gas Producers Renewable Energy Project proposed Title V Permit and the Sunshine Canyon Landfill Title V proposed Permit Renewal and Revision. At the public consultation meeting a number of interested stakeholders testified on one or both permit projects. In addition, a number of comments were made on the Final Subsequent Environmental Impact Report (SEIR) and the proposed permit for the Sunshine Gas Producers Renewable Energy Project. Comments on the SEIR are online at the following URL: http://www.aqmd.gov/ceqa/nonaqmd.html. This document contains AQMD staff's responses to comments made on the Title V permits for each project. Responses to comments made on the Final SEIR for the Sunshine Gas Producers Renewable Energy Project have been prepared in a separate document.

Air quality analysis was not available for public review as indicated in the notice

In accordance with AQMD Rule 3006-Public Participation for Title V Permits and Rule 212-Standards for Approving Permits and Issuing Public Notice, copies of the proposed permits and the supporting analysis for Sunshine Gas Producers (SGP) Renewable Energy Project were made available for public review at the AQMD headquarters and at the Sylmar library from January 30, 2012 until March 1, 2012. In response to a public request, an additional copy of the SGP proposed permit and its analysis were hand delivered and placed in the Granada Hills library immediately upon its re-opening on February 7, 2012. In addition, an electronic version of the package was e-mailed to the requestor on February 9, 2012 and a hard copy of the same was placed in the mail to the requestor on the same day.

The proposed permits with the supporting analysis for the Sunshine Canyon Landfill (SCLF) project (Title V permit renewal, addition of new flare number 9, modifications to flare numbers 1, 3 & 8 and increase of volatile organic emissions for flare number 3) were made available at the AQMD headquarters and in both the Granada Hills and Sylmar public libraries from March 19, 2012 until April 18, 2012.

Odor issues in the surrounding communities have yet to be resolved

In response to the substantial number of odor complaints, the AQMD held multiple hearings before its Hearing Board in December 2009, and February and March 2010. The AQMD issued an Order for Abatement in April 2010, which was subsequently amended in July 2010, January 2011, October 2011 and December 2011. The Order for Abatement identified numerous factors as potential contributors to the odor issues including, increases in delivered tonnage of trash, size and location of the landfill working face, Monday morning deliveries containing trash that was picked up the prior Friday or Saturday which allowed decomposition to begin prior to disposal, trash trucks on the mile-long haul road emitting odors from both trash and leaking liquid, landfill gas (LFG) emissions from either the surface of the landfill or LFG control equipment, and the type of cover on the working face.

The AQMD Order for Abatement (April 2010) mandated a list of mitigation measures to reduce odors from the landfill. SCLF was required:

- to limit landfilling under certain wind conditions during certain times of day;
- to enhance waste cover at the working face; and
- to implement a program designed to reduce odors such as reduction of activities at the working face, enhanced odor patrols, rerouting of transfer trucks on Monday mornings, and replanting lost vegetation that enhanced dispersion of odors.

In addition, SCLF was required to engage in a variety of studies aimed at better understanding the sources of odors from SCLF, the transport of odors from SCLF to the community, and potential odor reduction measures.

The most recent Amendment to the Abatement Order (December 2011) and the previous Order (October 2011) required SCLF to take additional odor remediation measures such as installing additional LFG collection wells; additional surface LFG monitoring; an additional physical or computer modeling study; hiring corrective action managers at SCLF; hiring an independent environmental consultant to monitor odors and other environmental parameters; installing a new flare; and conducting additional environmental monitoring.

Since July 2010, SCLF has completed the following tasks:

- Installed total of 156 new wells;
- Retrofit well boots on 350 existing wells;
- Installed 12,000 linear feet of horizontal collectors;
- Installed 9,200 feet of larger diameter header pipe;
- Refurbished all blowers;
- Installed a temporary flare and in the process of installing a new flare (flare 9); and

- Placed additional soil on 75 acres of slopes to improve cover integrity.

The SCLF will need to install a new flare (Flare 9) upon issuance of the permit to construct by AQMD. They will also need to conduct a modeling study to determine additional techniques that may be used to remedy the odor impacts on the nearby community. AQMD will continue to diligently monitor the odors at SCLF and its surrounding neighborhood and will work very closely with the community and SCLF to ensure odor issues are addressed and resolved.

Since the Order for Abatement and its subsequent amendments serve as the "Compliance Schedule" for Title V Permit purposes, the proposed SCLF permits have incorporated its provisions and thus complied with the requirements of Rule 3004 (a)(10)(C). In addition, the issuance of the proposed Title V permit renewal and permit to construct the new flare for SCLF will further enhance control of any landfill gas migration. The construction of the SGP renewable energy project is not expected in any way to exacerbate the odor problems at the landfill, as the project will not result in the generation of odorous gas and is not expected to affect the gas collection system.

<u>Operators should be required to scrub and limit the emissions from the energy plant to the standard of not exceeding that of the current flares</u>

While the emissions from the gas turbines at the proposed energy plant are generally higher than that of the existing flares, the increases have been minimized. The gas turbines comply and in fact exceed the Best Available Control Technology (BACT) standards. The AQMD's evaluation also shows that the gas turbines comply with all the applicable air quality rules and regulations for criteria pollutants (e.g., CO, NOx, VOC, SOx and PM_{10}) and toxic air contaminants (e.g., benzene, vinyl chloride, trichloroethylene, and tetrachloroethylene). In addition, at the request of AQMD, SGP evaluated whether additional emission reductions can be achieved from the operation of the gas turbines. One option that was considered to be a possible technology to reduce emissions from the proposed turbines were Selective Catalytic Reduction (SCR) for NOx control, combined with an oxidation catalyst for CO and VOC control. Additional controls for PM such as cyclones, baghouses, wet scrubbers and wet/dry electrostatic precipitators were also evaluated as part of this study. Based on the SGP's analysis, no additional controls or pre-process modifications could be identified to further reduce emissions from the proposed equipment since the add-on controls would have resulted in additional environmental impacts, such as increase in particulate emissions, hazardous waste removal and disposal challenges, additional generation of solid waste and wastewater, and incompatibility between technologies.

Please see Attachment A in Appendix J of the Final Subsequent EIR for detailed information and analysis of the types of control equipment evaluated, including those identified above.

Cumulative Impacts were not considered as part of evaluation of the proposed projects

For permitting purposes, AQMD Rule 1303- New Source Review Requirements and Rule 1401- New Source Review of Toxic Air Contaminants require analysis of the emission increases from the SGP's gas to energy project or the flares at the SCLF for impacts from the emission increases from the proposed equipment. Based on this analysis, operation of the proposed equipment complies with the requirements of both rules. Additionally, AQMD staff has conducted a Cumulative Impacts analysis as part of its CEQA analysis for the SGP's project under the Final SEIR. Please See Chapter 5 of the Final SEIR for a detailed analysis on Cumulative Impacts.

Landfill gas generation rate has been underestimated

The amount of landfill gas combusted in the proposed SGP project or the SCLF project will not exceed the amount of gas generation predicted and analyzed in the 1999 Final Subsequent Environmental Impact Report (SEIR) for the SCLF, which is 20,835 standard cubic feet per minute (SCFM) and the projects will not exceed the amount analyzed in the AQMD's final SEIR for the proposed SGP project, which is 16,100 SCFM at 50% methane. In order to ensure that these SEIR projected gas generation rates are not exceeded, the permits for both the SGP's gas to energy project and the Title V permit at SCLF have conditions that limit the amount of the landfill gas that can be processed or combusted. In the event that future gas generation exceeds the limits specified in the SEIR and subsequently requires installation of additional combustion devices or increase in allotted gas that can be destructed by the current flares, SCLF will be required to undergo additional permitting and further CEQA analysis.

For additional discussions on the LFG generation please see Sections 11.3.7 and 13B-5 in Appendix J of the Final SEIR.

Risk Assessment Procedures are flawed

Rule 1401, New Source Review of Toxic Air Contaminants (TAC), requires that prior to the issuance of a permit, new emission units that have the potential to emit TACs must demonstrate compliance with specified limits for maximum individual cancer risk and acute and chronic hazard indices. To demonstrate compliance with this rule, a health risk assessment was performed to calculate residential maximum individual cancer risk (MICR), as well as the residential chronic hazard index (HIC) and acute hazard index (HIA) for non-cancer health risks from TACs emitted from the proposed LFG-fueled devices to residential receptors. This analysis was conducted as part of the AQMD permit applications for the SGP and SCLF. The risk assessment followed a standard protocol and utilized American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD - version No. 07026) and procedures specified in the AQMD document Risk Assessment Procedures for Rules 1401

and 212, Version 7.0 and the Permit Application Package L for permit applications deemed complete after July 1, 2005.

Based on the analysis described above, the MICR values calculated at the nearest residential receptors for SGP gas to energy project would be less than 0.07 in one million (7.0×10^{-8}) and 0.09 in one million (9.0×10^{-8}) for the addition of the new flare at SCLF. Also, the Hazard Indices (HI) for acute exposure (HIA) and long term exposure (Chronic or HIC) for SGP gas to energy project are calculated to be 6.54×10^{-2} (0.065) and 1.3×10^{-3} (0.0013), respectively. The HIA and HIC for the addition of the new flare at SCLF are calculated to be 5.4×10^{-3} (0.0054) and 4.2×10^{-4} (0.00042) respectively. These hazard indices for both projects are well below 1, which is the regulatory limit for non-cancer health impacts under Rule 1401 and is the reference number below which the State public health experts have determined that the surrounding community including the most sensitive individuals such as very young children and the elderly will not experience any adverse health impacts due to the toxic nature of TAC from SGP gas to energy project and the new flare at SCLF. The MICR and HI values calculated for the nearest residential receptors for both projects comply with the thresholds set forth by Rules 1401. For additional information on toxics please see CEQA comment response #2.

Additional Risk Associated with Higher PM Emissions

As required by Rule 1303-New Source Review Requirements, air dispersion modeling was conducted to calculate ambient air concentrations of criteria pollutants NO_2, CO, and PM_{10} from the proposed project sources to determine the localized air quality impacts to the nearest sensitive receptors. VOC and SO_x are not required to be modeled under Rule 1303, Appendix A, because they do not normally contribute to localized air quality impacts. Because $PM_{2.5}$ emissions are part of PM_{10} emissions and the significance thresholds are the same for PM_{10} and $PM_{2.5}$, $PM_{2.5}$ emissions were not modeled separately but were included as part of the modeling results for PM_{10}.

Based on the modeling analysis, the calculated impacts on ambient air concentration of NO_2, CO, and PM_{10} at the nearest sensitive receptors would be below significance thresholds. For example the maximum ground-level concentration of PM_{10} for the SGP gas to energy project is 2.1 micrograms per cubic meter (ug/m^3) for 24 hour averaging time and 0.36 ug/m^3 for annual averaging time, which are less than the significant thresholds of 2.5 ug/m^3 and 1 ug/m^3 for 24 hours and annual averaging time, respectively, as specified in Rule 1303. Therefore, no significant adverse localized air quality impacts to the nearest sensitive receptors are anticipated to occur from the operation of the proposed projects. For additional information on SGP gas to energy project Localized Operational Impact to Ambient Air Quality please see Section 4.2.3.5 of the Final SEIR of the proposed project and response to CEQA comment #15. Additional information on the proposed new flare can be located in the permitting evaluation of the SCLF proposed Flare #9.

What is a sensitive receptor?

A sensitive receptor includes residences, public and private schools (kindergarten through grade 12), licensed daycare centers, hospitals, retirement homes, rehabilitation centers, and convalescent homes. For an expanded definition and additional Analysis of Impacts to Sensitive Receptors please see Section 4.2.3.6 of the FSEIR and Appendix J of FSEIR (response to comment letter No. 6) for the proposed SGP project.

Does the landfill comply with the greenhouse gas (GHG) reduction requirements for Assembly Bill (AB) 32?

Landfills are subject to a specific state regulation, Regulation to Reduce Methane Emissions from Municipal Solid Waste Landfills, effective June 17, 2010. The state regulation was based largely on AQMD Rule 1150.1 – Control of Gaseous Emissions from Municipal Solid Waste Landfills. Rule 1150.1 was amended in April 2011 to make the local rule inclusive of all the state requirements. AQMD inspects the facility frequently to monitor compliance with these requirements.

Why does AQMD allow purchase of emission credits as mitigation measures?

The use of Emission Reduction Credits, or ERCs, is required by both federal and state New Source Review programs. It is included in AQMD's New Source Review rules (Regulation XIII), as well. When ERCs are generated, they undergo a rigorous analysis and there are many conservative approaches built-in. For additional information on AQMD methodology on calculation procedure and granting of ERCs please refer to AQMD Rule 1306-New Source Review Emission Calculations, and Rule 1309-Emission Reduction Credits and Short Term Credits. For additional discussion on emission credits used a mitigation measure for the SGP project please see CEQA response to comment #16.

Dispersion/Modeling

A comment was made that low velocity laminar airflow at ground level may limit dispersion of landfill gas. Staff concurs, and clarified that modeling of combustion-related emissions from the turbines and flares are more buoyant because the emissions are at a higher temperature at the point of release which is not affected by low velocity laminar airflow at the ground level.

What is the amount of trash that SCLF can accept?

SCLF is an existing Class III nonhazardous landfill facility and has a valid solid waste permit from CalRecycle to accept up to 12,000 tons/day of municipal solid waste.

Does the SGP gas-to-energy plant meet the 1-hour federal standard for NOx?

For permitting purposes, compliance with the new federal 1-hour NO_2 standard is required to be demonstrated if a project is subject to the Prevention of Significant Deterioration (PSD) regulation. The SGP Gas-to-Energy Project is not subject to the PSD regulation because its projected maximum emissions are less than the applicable thresholds. As a result, the new federal 1-hour NO_2 standard is not applicable to the project. However, in response to comments received on the SGP permit, modeling was conducted and the results demonstrated that the project would comply with the new 1-hour federal standard for NOx.

Where are the flares located and how close are these flares to residents?

SCLF currently has three permitted flares and one temporary flare operating at their facility. The map below provides the location of the existing and the proposed flares in the landfill. The approximate distances of the flares to the closest residence are:

Flare 1: 2,500 feet
Flare 3: 7,140 feet
Flare 8: 8,700 feet
Proposed Flare 9: 8,700 feet

TOPOGRAPHIC DRAWING OF SUNSHINE CANYON

Showing Sunshine Canyon Landfill Property Line in Relation to Current and Proposed Flare(s)